

Appl. No. : 10/799,337
Filed : March 12, 2004

REMARKS

The following remarks are responsive to the June 16, 2005 Office Action.

Abstract

The abstract has been amended to be within the range of 50 to 150. Therefore, the abstract is proper. Accordingly, Applicant respectfully request the objection to the abstract to be withdrawn.

Claims

Claims 1, 2, and 4 have been amended. Claims 5-20 are new. Claims 1-20 are therefore presented for further consideration.

Rejection of Claim 1 under 35 U.S.C. § 102(e)

In the June 16, 2005 Office Action, Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,083,218 to Chou.

Applicant submits, however, that Chou fails to teach either expressly or inherently, each of the elements of Claim 1 as amended. For example, Chou does not disclose “a cooler for cooling the diseased skin to below about 0 °C” as recited in amended Claim 1. Chou discloses coolant water that is “cooled to a temperature in the range of 15 °C to 30 °C” and not below 0 °C. Accordingly, Chou does not teach cooling the diseased skin to below about 0°C.

Applicant submits therefore that Chou does not anticipate Claim 1. Applicant respectfully requests that the rejection of Claim 1 be withdrawn.

Rejection of Claims 1-4 under 35 U.S.C. § 103(a)

In the June 16, 2005 Office Action, Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,413,268 to Hartman in view of U.S. Patent No. 5,830,208 to Muller.

Regarding Claim 1, Hartman does not teach or suggest a cooler for cooling the diseased skin to below about 0 °C. Muller also does not teach or suggest a cooler for cooling the diseased skin to below about 0 °C. Instead, Muller only teaches that the skin may be cooled to a temperature “a few degrees below a ‘safe’ skin temperature.” Muller at col. 7, ll. 27-28. By

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contrast, Claim 1 recites an apparatus comprising “a cooler for cooling the diseased skin to below about 0 °C.” Therefore, Hartman, alone or in combination with Muller, does not teach or suggest the elements of Claim 1.

Applicant respectfully submits that Hartman in view of Muller does not provide all the limitations of Claim 2. Claim 2 recites “a cooler . . . configured to cool the diseased epidermal tissue to substantially below about 34°C.” Neither Hartman nor Muller teaches or suggests “a cooler . . . configured to cool the diseased epidermal tissue to substantially below about 34°C.”

Claim 3 depends from Claim 2 and includes the limitations recited in Claim 2 in combination with other limitations of particular utility. Hartman and Muller therefore fail to disclose the combination of features recited in Claim 3.

Applicant also submits that Hartman, alone or in combination with Muller, does not disclose each of the limitations recited in Claim 4. For example, neither Hartman nor Muller teaches or suggests “cooling the diseased tissue to below about 5 °C.” As described above, Muller only teaches that the skin may be cooled to a temperature “a few degrees below a ‘safe’ skin temperature.”

Accordingly, Applicant respectfully submits that Claims 1-4 are patentably distinct from Hartman and Muller.

Additionally, there is no motivation to combine Hartman and Muller. Hartman teaches that the basis for phototherapy is believed to be the direct interaction of light of certain frequency responses with tissue to cause a change in immune response. Hartman at col. 1, ll. 24-26. Frequency is inversely proportional to wavelength. Thus, based on the teaching of Hartman, one skilled in the art would not be motivated to combine one reference about the response of skin to treatment at a first wavelength with the teaching of another reference about a second different wavelength from a substantially different portion of the spectrum.

Muller teaches lasers including CO₂, holmium, Er:YAG, Nd: YAG and flash lamp pumped dye lasers. See Muller at col. 4, ll. 21-23. However, the lowest wavelength light source taught by Muller is 585 nanometers for a pumped dye laser. None of those light sources produces UV light within the range of 300 and 315 nanometers. Therefore, there is no motivation or suggestion to combine Hartman, which discloses the narrow band of UV light and no cooling system, with Muller, which discloses a cooling system and no UV light.

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Moreover, Hartman teaches treatments with UV light up to 6 MED. Hartman at col. 8, l. 27 & col. 11, ll. 31-32. However, Hartman does not report problems at any dosage level that would cause one of skill in the art to look to another reference, such as Muller, to solve such problems. Thus, there is no motivation to combine Hartman with Muller.

Applicant therefore respectfully requests that the rejection of Claims 1-4 over Hartman in view of Muller be withdrawn.

CONCLUSION

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In light of the above remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner has any questions regarding the foregoing, the Examiner is invited to contact the undersigned at the phone number listed below.

Respectfully submitted,

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Dated: 12/15/05

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